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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,521	08/29/2003	Kevin K. Main	TI-35983	8859
23494	7590	09/22/2005		
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			EXAMINER CERULLO, JEREMY S	
			ART UNIT 2112	PAPER NUMBER

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,521

Applicant(s)

MAIN ET AL.

Examiner

Jeremy S. Cerullo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20040914.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-18 are pending in the following action.

Claim Objections

2. Claim 15 is objected to because of the following informalities: In the fourth line of the claim, "LPC Transaction Packet" should apparently be "LPC Transaction Packets". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

5. Claims 1-18 contains the trademark/trade name PCI_Express. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is

used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a third generation I/O interconnect intended to replace the parallel PCI with a serial interface, and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0221036 (hereinafter referred to as “Konetski”). Konetski discloses a computer docking station (Figure 5, Item 700) to receive a portable computer (Figure 5, Item 600; Page 3, Paragraph [0023]) and peripheral devices (Figure 5, Items 705 and 710). Konetski also discloses that the communications link between the portable computer and the peripheral devices comprises a 3GIO (another term for PCI Express) bus couplable to the portable computer and at least one of the peripheral devices for communicating commands of data between the computer in the

docking station and the peripheral device. See Figure 5, Item 725 and Paragraph [0023] on Page 3.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,336,158 (hereinafter referred to as "Martwick") in view of "Creating a PCI Express™ Interconnect" (hereinafter referred to as "Bhatt") and PCI Express™ Base Specification Revision 1.0a (hereinafter referred to as "PCI Express Spec").

11. As for Claim 1, Martwick teaches (Column 4, Lines 15-29) a computer system comprising a portable computer having an LPC bus (Figure 1, Item 170) and a docking station (Figure 1, Item 120) to receive the portable and peripheral devices (Figure 1, Item 118). Martwick also teaches that the docking station maybe positioned on the LPC for communication with the laptop computer (Column 12, Lines 38-52). Martwick does not teach the use of a PCI Express fabric for communicating between the LPC bus and the peripheral devices. However, Bhatt does teach the use of PCI Express for communication with a docking station for a mobile computer (Figure 4 on Page 3). It is commonly known in the art that the signals on the LPC bus are a subset of the signals of PCI. As PCI Express has a software model compatible with PCI and also many advantages (See Section 1.1 of PCI Express Spec), it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the PCI Express connection as taught by Bhatt in the system as taught by Martwick for communication between the LPC bus and peripheral devices.

12. As for Claim 6, Martwick teaches a docking station (Figure 1, Item 120) to receive a portable computer (column 4, Lines 15-29) and peripheral devices (Figure 1, Item 118). Martwick also teaches that the docking station maybe positioned on the LPC for communication with the laptop computer (Column 12, Lines 38-52). Martwick does not teach the use of a PCI Express fabric for communicating between the portable computer and the peripheral devices. However, Bhatt does teach the use of PCI Express for communication with a docking station for a mobile computer (Figure 4 on Page 3). It is commonly known in the art that the signals on the LPC bus are a subset

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of the signals of PCI. As PCI Express has a software model compatible with PCI and also many advantages (See Section 1.1 of PCI Express Spec), it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the PCI Express connection as taught by Bhatt in the system as taught by Martwick for communication between the portable computer and peripheral devices.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,590,377 (hereinafter referred to as "Smith") in view of Bhatt and PCI Express Spec. Smith teaches a computer docking station (Figure 2, Item 120) with a communications link between the portable computer and the peripheral devices (Figure 2, Items 263,266). Smith teaches does not teach a PCI Express fabric for communicating between the portable computer and the peripheral devices, but Smith does teach the use of a PCI bus for said communication (Figure 2). As PCI Express has a software model compatible with PCI and also many advantages (See Section 1.1 of PCI Express Spec), it would have been obvious to one of ordinary skill in the art at the time of the invention to have used the PCI Express connection as taught by Bhatt in the docking station as taught Smith for communication between the portable computer and peripheral devices.

Allowable Subject Matter

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14. The following is a statement of reasons for the indication of allowable subject matter:

15. Claim 2 is considered to contain allowable subject matter, particularly due to the limitation "...a hybrid PCI_Express downstream port coupled to the LPC bus and to a computer host for receiving PCI_Express packets and LPC commands or data for transmission along a PCI_Express fabric." This limitation distinguishes the invention from the prior art of record.

16. Claims 3-5 contain the same allowable subject matter due to their dependence upon Claim 2.

17. Claim 7 is considered to contain allowable subject matter, particularly due to the limitation "...a hybrid PCI_Express downstream port coupled to a LPC bus of a computer and to a computer host for receiving PCI_Express packets and LPC Transaction Packets for transmission along a PCI_Express fabric." This limitation distinguishes the invention from the prior art of record.

18. Claims 8-10 contain the same allowable subject matter due to their dependence upon Claim 7.

19. Claim 11 is considered to contain allowable subject matter, particularly due to the limitation "...a hybrid PCI_Express downstream port coupled to a computer LPC bus and to a computer host for receiving PCI_Express packets and LPC data or commands

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for transmission along a PCI_Express fabric...” This limitation distinguishes the invention from the prior art of record.

20. Claims 12-14 contain the same allowable subject matter due to their dependence upon Claim 11.

21. Claim 15 is considered to contain allowable subject matter, particularly due to the limitation that the method comprises “...controlling the data flow on the PCI_Express fabric to insert at a first location on the PCI_Express fabric PCI_Express packets corresponding to LPC Transaction Packet[s] into unused portions of the PCI_Express traffic...” While prior art exists that makes it obvious to communicate with LPC data or commands over a PCI_Express fabric (See rejection of Claim 1 above), prior art has not been found that teaches the specifics of controlling data flow on the PCI_Express fabric for inserting LPC Packets.

22. Claim 16 contains the same allowable subject matter due to its dependence upon Claim 15.

23. Claim 17 is considered to contain allowable subject matter, particularly due to the limitation that the method comprises “...generating in an LPC slave coupled to the peripheral device a PCI_Express upstream packet requesting a serial IRQ or DMA request...” While prior art exists that makes it obvious to communicate with LPC data or commands over a PCI_Express fabric (See rejection of Claim 1 above), prior art has not

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been found that teaches the specifics of generating PCI_Express packets in an LPC slave.

24. Claim 18 contains the same allowable subject matter due to its dependence upon Claim 17.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application Publication No. 2003/0093607.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JSC



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9/19/05